



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
ENVIRONMENTAL TECHNICAL STUDIES OFFICE
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BUTCH ELEY
DEPUTY GOVERNOR &
COMMISSIONER OF TRANSPORTATION

BILL LEE
GOVERNOR

MEMORANDUM

To: Jeff Blevins
Alternative Delivery-Manager

From: James Ian Quilliams
Region 2 Ecology-Senior Technical Specialist

Date: 7/1/2025

Subject: Environmental Boundaries Report for:
Marion Co., Shellmound Rd. LM 1.27 to LM 1.47 Bridge Replacement
PIN Number: 130902.00

An ecological evaluation of the subject project has been conducted in response to an initial evaluation request with the following results:

STREAMS: There is one (1) stream, and one (1) wet weather conveyance identified within the project limits.

WETLANDS: There is one (1) wetland identified within the project limits.

OTHER FEATURES: There is one (1) pond identified within the project limits.

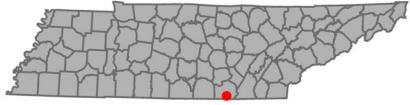
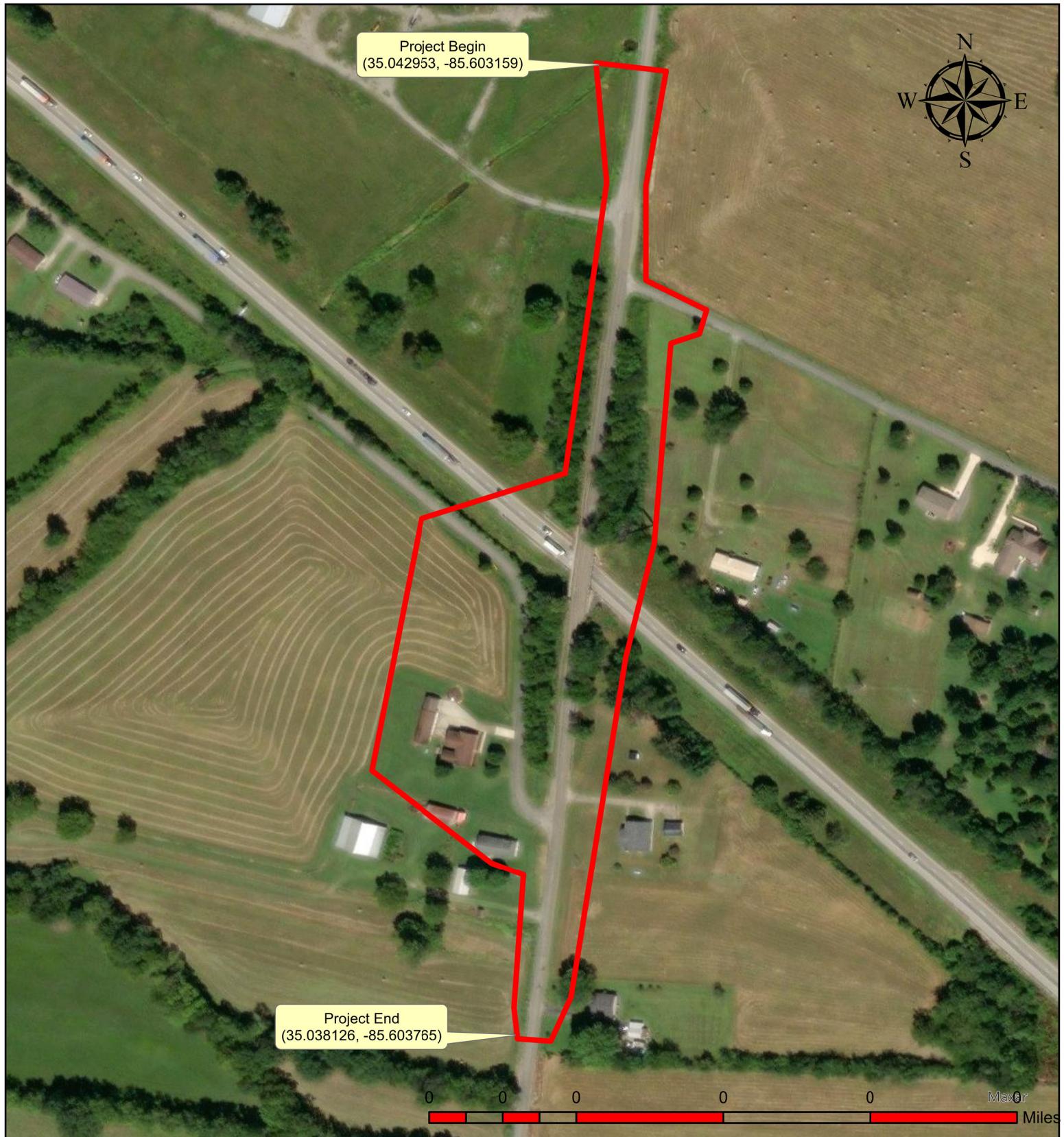
SPECIES:

- **USFWS:** Coordination with USFWS has been completed resulting in a project commitment.
- **TWRA:** Coordination with TWRA has been completed with no species concerns.
- **TDEC DNA:** TDOT ecology has determined that the subject project meets condition (1) of the TDEC DNA MOA.

COMMITMENTS: All tree clearing activities will take place between November 16th and March 31st.

Your assistance is appreciated. If you have any questions or comments, please contact me at (423-463-6103) or James.Quilliams@tn.gov.

CC: Region 2 Environmental Section: Scott Medlin, Chester Sutherland, Colby Mann, Rooney Ramos, Jesse Wooden
Region Preconstruction: Doug Ford, Jason Ingram, Rachel Gentry
HQ Ecology: Brendan Barney, Dennis Crumby
HQ Permits: Shawn Wurst
TDOT.Env.Ecology@tn.gov
TDOT.Env.Permits@tn.gov
TDOT.Env.Mitigation@tn.gov
TDOT.Env.NEPA@tn.gov



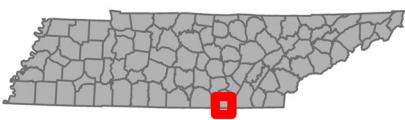
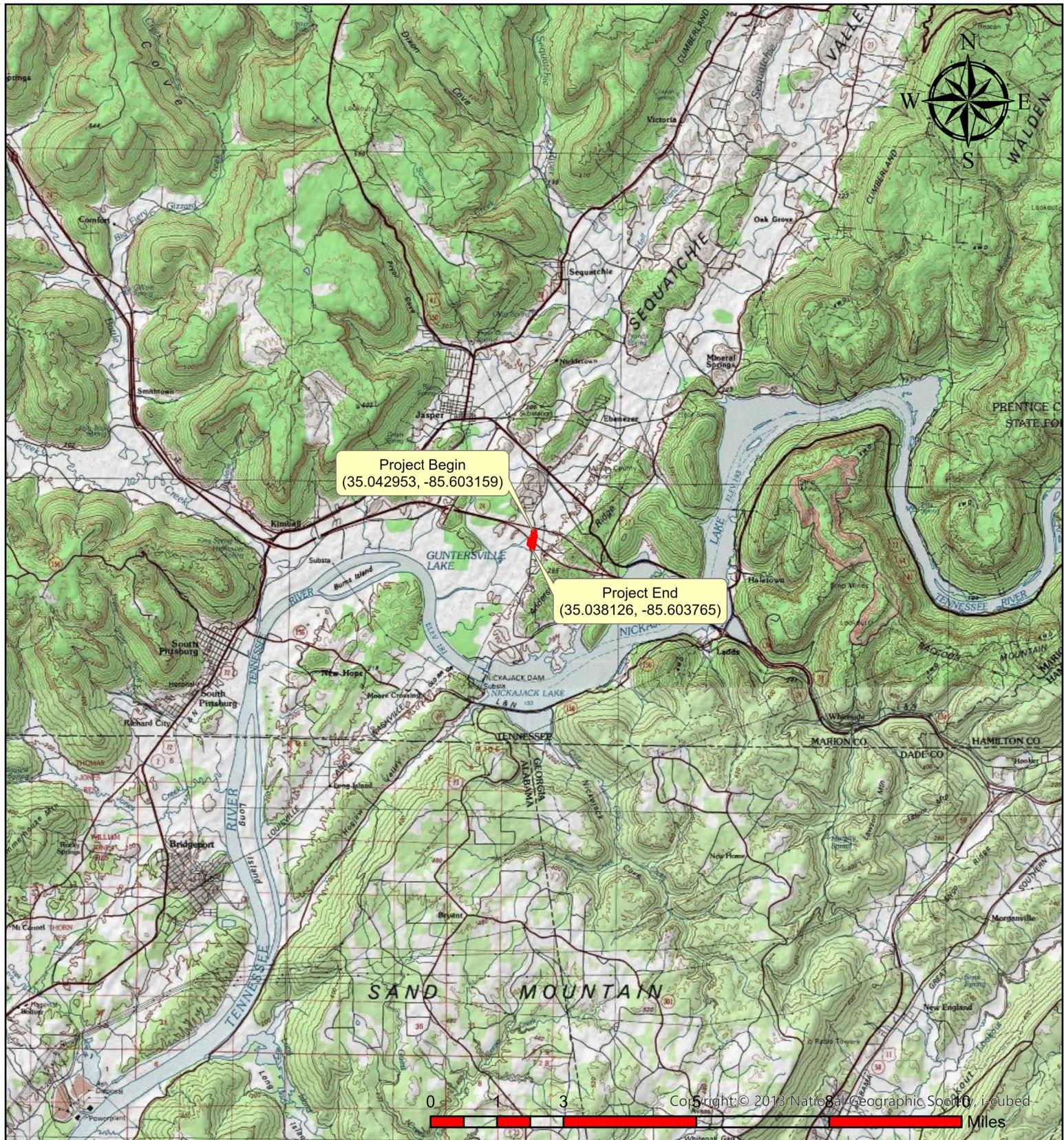
Project Location Aerial Map

Marion Co., Shellmound Rd. LM 1.27 to LM 1.47 Bridge Replacement

11/1/2024

PIN 130902.00



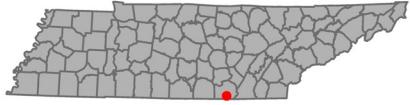
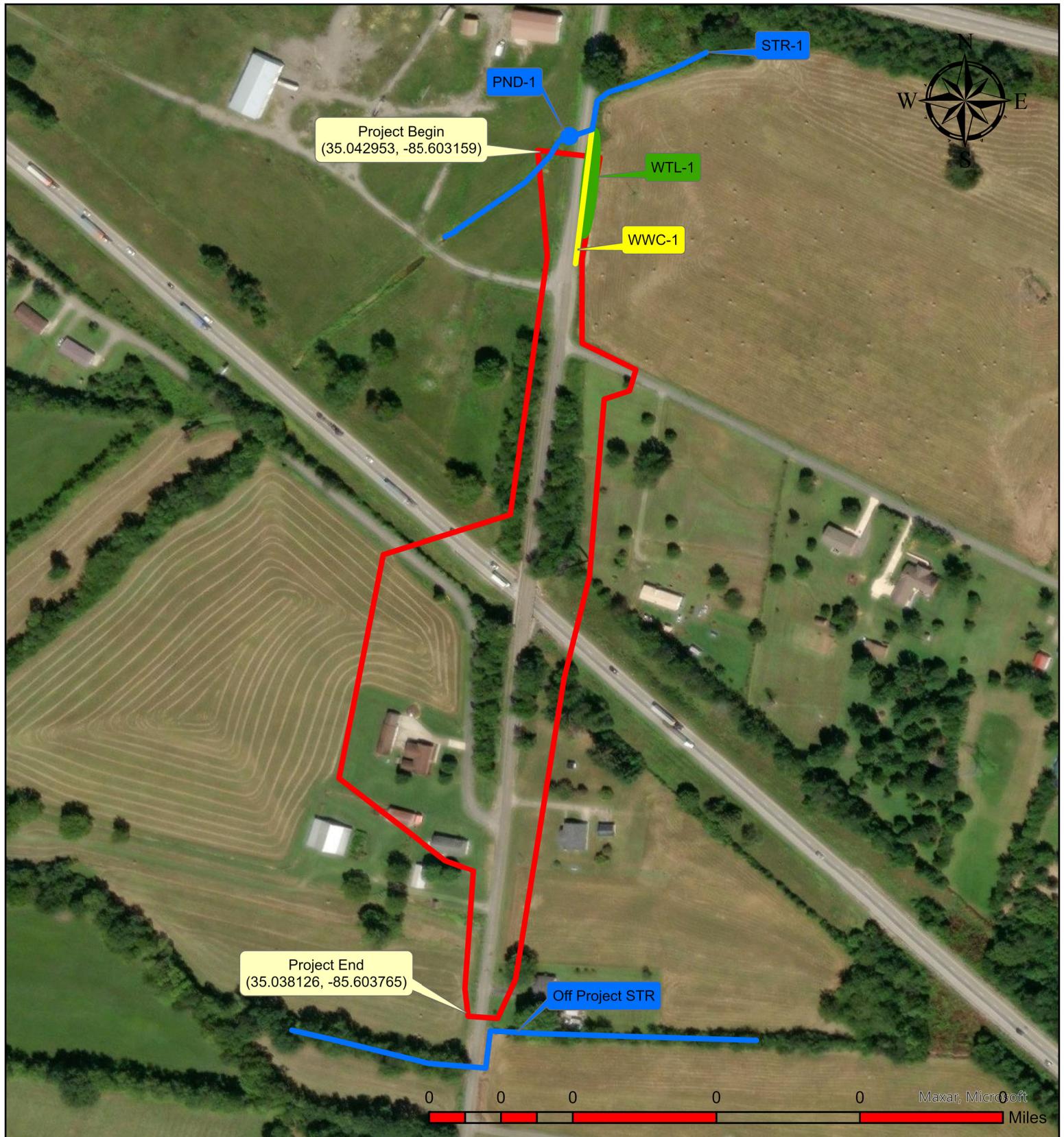


Project Location Topographical Map

Marion Co., Shellmound Rd. LM 1.27 to LM 1.47 Bridge Replacement

11/1/2024

PIN 130902.00



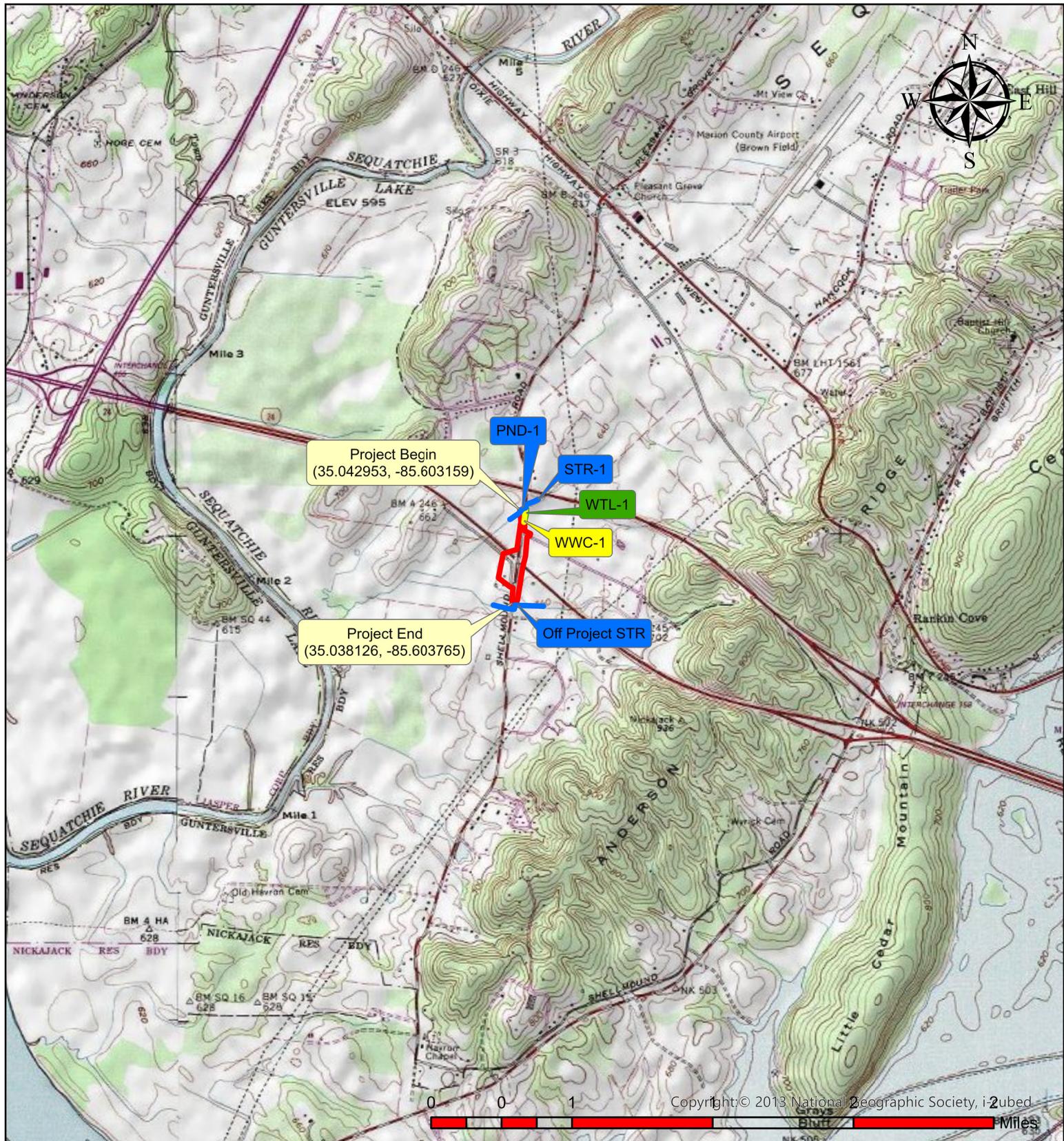
Project Location Water Resource Map

Marion Co., Shellmound Rd. LM 1.27 to LM 1.47 Bridge Replacement

11/1/2024

PIN 130902.00



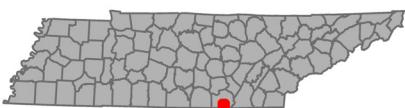


Project Location Water Resource Map

Marion Co., Shellmound Rd. LM 1.27 to LM 1.47 Bridge Replacement

11/1/2024

PIN 130902.00



Project Name:	Marion Co., Shellmound Rd. LM 1.27 to LM 1.47	PIN: 130902.00
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Water Resource Table

Based on: ETSA

Date: 8/22/2024

Water Resources (Non-Wetland)					
Label	Type	Latitude	Longitude	Receiving Waters	Quality
STR-1	Intermittent Stream	35.043711	-85.601827	Sequatchie River	Unassessed
PND-1	Pond	35.043135	-85.603127	Sequatchie River	Not Applicable
WWC-1 *(130900.00-WWC-2)	Wet Weather Conveyance	35.043083	-85.602997	Sequatchie River	Not Applicable

Water Resources (Wetland)*

Label	Type	Latitude	Longitude	Receiving Waters	Quality
WTL-1	Emergent	35.043083	-85.602997	Sequatchie River	Low Resource Value

Ecology Field Data Sheet: Water Resources

Project: 130902.00 Marion Co., LM 1.29 to LM 1.47 Shellmound Rd., Bridge Replacement

Biologist:	JIQ	Affiliation:	TDOT	Date:	8-21-2024
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1-Station: from plans	N/A									
2-Map label and name	STR-1									
3-Latitude/Longitude	35.043711, -85.601827									
4-Feature description:										
-channel identification	perennial stream	<input type="checkbox"/>	intermittent stream	<input checked="" type="checkbox"/>	ephemeral stream	<input type="checkbox"/>	wwc	<input type="checkbox"/>		
-HD score (if applicable)										
-OHWM indicators	bed & banks	<input checked="" type="checkbox"/>	deposition	<input type="checkbox"/>	presence of litter debris	<input type="checkbox"/>	scour	<input type="checkbox"/>	veg absent, bent, matted	<input checked="" type="checkbox"/>
	change in plant community	<input checked="" type="checkbox"/>	destruction of terrestrial veg	<input checked="" type="checkbox"/>	multiple observe flow events	<input type="checkbox"/>	sediment sorting	<input checked="" type="checkbox"/>	water staining	<input checked="" type="checkbox"/>
	change in soil character	<input checked="" type="checkbox"/>	leaf litter disturb or absent	<input type="checkbox"/>	natural line impressed on bank	<input checked="" type="checkbox"/>	shelving	<input type="checkbox"/>	wracking	<input type="checkbox"/>
-channel bottom width	3.2FT			-top of bank width		5.5FT				
-width and max depth at ordinary high water mark	3.2FT, 0.3FT									
-width at bankfull	5.5FT									
-bank height	LDB - 3.5FT				RDB - 3.5FT					
-riffle/pool complex or other specialized habitat present?	Yes									
-dominant riparian species: -----(LDB /RDB)-----	LDB: Ash, Cherry, Elm, Hackberry, Privet RDB: Ash, Cherry, Elm, Hackberry, Privet									
-particle size distribution %	Silt/Sand:	70	Gravel:	20	Cobble:	10	Boulder:		Bedrock:	
5-photo numbers	See Photolog									
6-HUC -8 Code & Name	06020004-Sequatchie River									
7-Assessed	yes	<input type="checkbox"/>	no	<input checked="" type="checkbox"/>						
8-ETW	yes	<input type="checkbox"/>	no	<input checked="" type="checkbox"/>						
9-303 (d) List	yes	<input type="checkbox"/>	siltation	<input type="checkbox"/>	habitat:	<input type="checkbox"/>	<input type="checkbox"/>	other:	<input type="checkbox"/>	<input type="checkbox"/>
10-Notes	<ul style="list-style-type: none"> -Feature presents as intermittent stream. -Feature crosses under I-24 at multiple locations. -Summer drought conditions. -Isolated pool at headcut containing fish. -Strong geomorphology, moderate/weak hydrology, and biology. -All misc trib in this waterbody will remain Not Assessed for all designated uses. 									

Revised July 2022

Ecology Field Data Sheet: Other Resource Features
 (Caves/Rock Houses; Potential Sinkholes; Specialized Habitats; Other)

Project: Marion Co., LM 1.29 to LM 1.47 Shellmound Rd. Bridge PIN #: 130902.00

Date of survey: 8-21-2024 Biologist(s): JIQ Affiliation: TDOT

1-Station: from plans	N/A	
2-Map label	PND-1	
3-Lat/Long	35.043135, -85.603127	
4-Potential impact size	80 SQ FT	
5-Feature name	Pond	
6-Feature description:		
what is the feature	Retention agricultural pond	
portion affected	Entire area in ETSA	
connection to other features	STR-1 conveys hydrology	
photo number(s)	See photolog	
other information		
7- HUC code & name if applicable (12-digit)	060200040306-Sequatchie River Outlet	
8-Notes	<ul style="list-style-type: none"> -Multiple agricultural ponds are located off project in the general area. -Presence of fish identified on survey date. -Feature act as overflow during heavy precipitation events. 	

Ecology Field Data Sheet: Water Resources

Project: 130902.00 Marion Co., LM 1.29 to LM 1.47 Shellmound Rd., Bridge Replacement

Biologist:	JIQ	Affiliation:	TDOT	Date:	8-14-2024
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1-Station: from plans	N/A									
2-Map label and name	WWC-1 *(130900.00-WWC-2)									
3-Latitude/Longitude	35.043083, -85.602997									
4-Feature description:										
-channel identification	perennial stream	<input type="checkbox"/>	intermittent stream	<input type="checkbox"/>	ephemeral stream	<input type="checkbox"/>	wwc	<input checked="" type="checkbox"/>		
-HD score (if applicable)										
-OHWM indicators	bed & banks	<input checked="" type="checkbox"/>	deposition	<input type="checkbox"/>	presence of litter debris	<input type="checkbox"/>	scour	<input type="checkbox"/>	veg absent, bent, matted	<input checked="" type="checkbox"/>
	change in plant community	<input type="checkbox"/>	destruction of terrestrial veg	<input checked="" type="checkbox"/>	multiple observe flow events	<input type="checkbox"/>	sediment sorting	<input type="checkbox"/>	water staining	<input checked="" type="checkbox"/>
	change in soil character	<input type="checkbox"/>	leaf litter disturb or absent	<input type="checkbox"/>	natural line impressed on bank	<input type="checkbox"/>	shelving	<input type="checkbox"/>	wracking	<input type="checkbox"/>
-channel bottom width	1.5FT			-top of bank width		3FT				
-width and max depth at ordinary high water mark	N/A									
-width at bankfull	N/A									
-bank height	LDB - 5FT				RDB - 7FT					
-riffle/pool complex or other specialized habitat present?	No									
-dominant riparian species: ----- (LDB /RDB) -----	LDB: Ash, Sweetgum, Ironweed, Ragweed, Fescue, Johnson grass RDB: Ash, Sweetgum, Ironweed, Ragweed, Fescue, Johnson grass									
-particle size distribution %	Silt/Sand:	10	Gravel:	30	Cobble:	60	Boulder:		Bedrock:	
5-photo numbers	See Photolog									
6-HUC -8 Code & Name	06020004-Sequatchie River									
7-Assessed	yes	<input type="checkbox"/>	no	<input checked="" type="checkbox"/>						
8-ETW	yes	<input type="checkbox"/>	no	<input checked="" type="checkbox"/>						
9-303 (d) List	yes	<input type="checkbox"/>	siltation	<input type="checkbox"/>	habitat:	<input type="checkbox"/>	<input type="checkbox"/>	other:	<input type="checkbox"/>	<input type="checkbox"/>
10-Notes	<ul style="list-style-type: none"> -Feature conveys precipitation driven hydrology along roadside ditch on Shellmound Rd. and drains agricultural field. -Discharges hydrology to small retention pond outside of ETSA. -Weak geomorphology, hydrology, and biology. -Hydric soil in channel and banks. -Summer drought conditions. 									

Revised July 2022

Hydrologic Determination Field Data Sheet
 Tennessee Division of Water Pollution Control, Version 1.5

Named Waterbody: Sequatchie River	Date/Time: 8-14-2024
Assessors/Affiliation: TDOT/JIQ	Project ID : 130902.0
Site Name/Description: WWC-1 *(130900.00-WWC-2)	0
Site Location: Marion Co., LM 1.29 to LM 1.47 Shellmound Rd., Bridge Replacement	
HUC (12 digit): 060200040306	Lat/Long:
Previous Rainfall (7-days) : 0.0IN	35.043083, -85.602997
Precipitation this Season vs. Normal : abnormally wet <input type="checkbox"/> elevated <input type="checkbox"/> average <input type="checkbox"/> low <input type="checkbox"/> abnormally dry <input checked="" type="checkbox"/> unknown <input type="checkbox"/>	
Source of recent & seasonal precip data : APT	
Watershed Size : 0.18SQ MI	County: Marion
Soil Type(s) / Geology : Linside silt loam (Hamblen)	Source: Websoil
Surrounding Land Use : Residential/Agricultural	
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes) : Severe <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Slight <input type="checkbox"/> Absent <input type="checkbox"/>	

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	<input type="checkbox"/>	WWC <input checked="" type="checkbox"/>
2. Defined bed and bank absent, vegetation composed of upland and FACU species	<input checked="" type="checkbox"/>	WWC <input type="checkbox"/>
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	<input type="checkbox"/>	WWC <input type="checkbox"/>
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	<input type="checkbox"/>	WWC <input type="checkbox"/>
5. Presence of multiple populations of obligate lotic organisms with \geq 2 month aquatic phase	<input checked="" type="checkbox"/>	Stream <input type="checkbox"/>
6. Presence of fish (except <i>Gambusia</i>)	<input checked="" type="checkbox"/>	Stream <input type="checkbox"/>
7. Presence of naturally occurring ground water table connection	<input checked="" type="checkbox"/>	Stream <input type="checkbox"/>
8. Flowing water in channel and 7 days since last precip $>0.1"$ in local watershed	<input checked="" type="checkbox"/>	Stream <input type="checkbox"/>
9. Evidence watercourse has been used as a supply of drinking water	<input checked="" type="checkbox"/>	Stream <input type="checkbox"/>

NOTE: If any Primary Indicators 1-9 = "Yes", then no further investigation is necessary. However, assessors may choose to score secondary indicators as supporting evidence.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in
TDEC-WPC Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 12

Justification / Notes :

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 4.5)	Absent	Weak	Moderate	Strong
	1	0	1	2
1. Continuous bed and bank	1	0	1	2
2. Sinuous channel	0	0	1	2
3. In-channel structure: riffle-pool sequences	0	0	1	2
4. Sorting of soil textures or other substrate	1	0	1	2
5. Active/relic floodplain	0	0	0.5	1
6. Depositional bars or benches	0	0	1	2
7. Braided channel	0	0	1	2
8. Recent alluvial deposits	0.5	0	0.5	1
9. Natural levees	0	0	1	2
10. Headcuts	0.5	0	1	2
11. Grade controls	.5	0	0.5	1
12. Natural valley or drainageway	1	0	0.5	1
13. At least second order channel on existing USGS or NRCS map	No=0			

B. Hydrology (Subtotal = 3.5)	Absent	Weak	Moderate	Strong
	0	1	2	3
14. Subsurface flow/discharge into channel	0	1	2	3
15. Water in channel and >48 hours since sig. rain	0	1	2	3
16. Leaf litter in channel (January – September)	1.5	1.5	1	0.5
17. Sediment on plants or on debris	0	0.5	1	1.5
18. Organic debris lines or piles (wrack lines)	0.5	0.5	1	1.5
19. Hydric soils in channel bed or sides of channel	Yes=1.5			

C. Biology (Subtotal = 4)	Absent	Weak	Moderate	Strong	
	2	3	2	1	0
20. Fibrous roots in channel bed ¹	2	3	2	1	0
21. Rooted plants in the thalweg ¹	2	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	0	1	2	3
23. Bivalves/mussels	0	0	1	2	3
24. Amphibians	0	0	0.5	1	1.5
25. Macrofauna (record type & abundance)	0	0	1	2	3
26. Filamentous algae; periphyton	0	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0	0.5	1	1.5
28. Wetland plants in channel bed ²	0	0	0.5	1	1.5

¹ Focus is on the presence of terrestrial plants.

² Focus is on the presence of aquatic or wetland plants.

Total Points = 12

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :

- Feature conveys precipitation driven hydrology along roadside ditch on Shellmound Rd. and drains agricultural field.
- Discharges hydrology to small retention pond outside of ETSA.
- Weak geomorphology, hydrology, and biology.
- Hydric soil in channel and banks.
- Summer drought conditions.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site:	130902.00 Marion Co., Shellmound Rd. LM 1.29 to LM 1.47 Bridge Replacement		City/County:	Marion		Sampling Date:	8-21-2024		
Applicant/Owner:	TDOT		State:	TN		Sampling Point:	WTL-1		
Investigator(s):	JIQ		Section, Township, Range:						
Landform (hillslope, terrace, etc.):	Slope	Local relief (concave, convex, none):		Concave	Slope (%):		2-5		
Subregion (LRR or MLRA):	LRR N	Lat:	35.043083		Long:	-85.602997		Datum:	N/A
Soil Map Unit Name:	Lindside silt loam (Hamblen)			NWI classification:			N/A		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If no, explain in Remarks.)									
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?				Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?				(If needed, explain any answers in Remarks.)					

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: Summer drought 8-21-2024.					

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Microtopographic Relief (D4)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Iron Deposits (B5)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			
<input type="checkbox"/> Water-Stained Leaves (B9)			
<input type="checkbox"/> Aquatic Fauna (B13)			
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: WTL-1

Tree Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1.	_____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	
2.	_____	_____	_____	_____	Total Number of Dominant Species Across All Strata: 2 (B)	
3.	_____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)	
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
6.	_____	_____	_____	_____		
0 = Total Cover						
50% of total cover: 0 20% of total cover: 0						
Sapling Stratum (Plot size: _____)						
1.	_____	_____	_____	_____	Prevalence Index worksheet:	
2.	_____	_____	_____	_____	Total % Cover of:	Multiply by:
3.	_____	_____	_____	_____	OBL species	x 1 =
4.	_____	_____	_____	_____	FACW species	x 2 =
5.	_____	_____	_____	_____	FAC species	x 3 =
6.	_____	_____	_____	_____	FACU species	x 4 =
0 = Total Cover					UPL species	x 5 =
50% of total cover: 0 20% of total cover: 0					Column Totals: 0 (A)	0 (B)
					Prevalence Index = B/A = _____	
Shrub Stratum (Plot size: _____)						
1.	_____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
2.	_____	_____	_____	_____	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
3.	_____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
4.	_____	_____	_____	_____	<input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$	
5.	_____	_____	_____	_____	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6.	_____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: _____)						
1.	<i>Carex cherokeensis</i>	40	Y	FACW	Definitions of Five Vegetation Strata:	
2.	<i>Eupatorium serotinum</i>	10	N	FACW	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).	
3.	<i>Vernonia gigantea</i>	10	N	FAC	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
4.	<i>Cyperus strigosus</i>	20	Y	FACW	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.	
5.	<i>Sorghum halepense</i>	10	N	FACU	Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.	
6.	<i>Schedonorus arundinaceus</i>	10	N	FACU	Woody vine – All woody vines, regardless of height.	
7.	_____	_____	_____	_____		
8.	_____	_____	_____	_____		
9.	_____	_____	_____	_____		
10.	_____	_____	_____	_____		
11.	_____	_____	_____	_____		
100 = Total Cover						
50% of total cover: 50 20% of total cover: 20						
Woody Vine Stratum (Plot size: _____)						
1.	_____	_____	_____	_____	Hydrophytic Vegetation Present?	
2.	_____	_____	_____	_____	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
3.	_____	_____	_____	_____		
4.	_____	_____	_____	_____		
5.	_____	_____	_____	_____		
0 = Total Cover						
50% of total cover: 0 20% of total cover: 0						
Remarks: (Include photo numbers here or on a separate sheet.)						

SOIL

Sampling Point: WTL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (**LRR N**)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (**LRR N, MLRA 147, 148**)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (**MLRA 147, 148**)
- Thin Dark Surface (S9) (**MLRA 147, 148**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
- Umbric Surface (F13) (**MLRA 136, 122**)
- Piedmont Floodplain Soils (F19) (**MLRA 148**)
- Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (**MLRA 147**)
- Coast Prairie Redox (A16)
(MLRA 147, 148)
- Piedmont Floodplain Soils (F19)
(MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Hydric Soil Present? Yes No

Remarks:

Tram User Guide

<u>SITUATION</u>	<u>TRAM REQUIRED</u>
------------------	----------------------

- Wetland is a “roadside ditch” and not part of a larger wetland – constructed primarily to convey runoff.....NO, COMPLETE EXCEPTIONAL STATUS WETLAND SECTION ONLY
- Fringe wetlands associated with ponds, impoundments, reservoirs, large lakes.....YES- USE NON-HGM TRAM
- Created Depression wetlands, semi-permanent to permanently inundated (<6.6-feet deep).....YES-USE NON-HGM TRAM
- Wetland impacts greater than 0.10 acre.....YES

NOTE: The Exceptional Status Wetland section must be completed for all proposed wetland alterations, including wetlands situations where HGM assessment is not required or the Non-HGM TRAM is used, including proposed wetlands impacts less than 0.10 acre.

An affirmative response to 1-6 of the Decision Table identifies the wetland per rule as an Outstanding Natural Resource Water (ONRW) or Exceptional Tennessee Waters (ETW). A positive response to 7-13 requires a final determination by the Department.

#	Wetland Feature Decision Table	Yes/No	Affirmative Result
1	The wetland has been designated as an Outstanding Natural Resource Water (ONRW) by the Department under 0400-40-03-06(5)(a).	No	ORNW
2	The wetland has previously been designated and documented as an Exceptional Tennessee Water (ETW) by the Department under 0400-40-03-06(4)(a)(7)	No	ETW
3	The wetland is within state or national parks, wildlife refuges, forests, wilderness areas, natural areas, or is a designated State Scenic Rivers or Federal Wild and Scenic Rivers.	No	ETW
4	The wetland is known to contain a documented non-experimental population of state or federally listed threatened or endangered aquatic or semi-aquatic plants, or aquatic animals.	No	ETW
5	The wetland or the area it is in has been designated by the U.S. Fish and Wildlife Service as " Critical Habitat " for any threatened or endangered aquatic or semi-aquatic plant or aquatic animal species.	No	ETW
6	The wetland falls within an area designated as Lands Unsuitable for Mining pursuant to the federal Surface Mining Control and Reclamation Act where such designation is based in whole or in part on impacts to water resource values	No	ETW
7	The wetland exhibits outstanding ecological or recreational values such as, <u>but not limited to</u>, those as outlined in 8-12	No	Determination Required by TDEC
8	The wetland fits within the species composition concept for any plant community found in the state of Tennessee ranked G2, G1, or more imperiled at the "Association" classification level according to the NatureServe and Natural Heritage Ranking system (e.g. "bog", "fen", and "wet prairie/barren" communities).	No	Determination Required by TDEC
9	The wetland is an uncommon resource (e.g. vernal pools, headwater wetlands, sinks, spring/seeps, glades, newly described communities, high recreational or socioeconomic value) in the region and/or is deemed such by concurrence of qualified scientists.	No	Determination Required by TDEC
10	The wetland is an older aged forested wetland comprised of overstory trees with an average diameter at breast height (dbh) being greater than or equal to 30 in within the WAA.	No	Determination Required by TDEC
11	The wetland is observed and documented to be a significant waterfowl, songbird, shorebird, amphibian, bat, fish habitat area . These may include rookeries, migratory congregations, nesting sites, breeding areas, etc.	No	Determination Required by TDEC
12	The wetland is hydrologically connected to and/or has significant ecological contribution to an ETW	No	Determination Required by TDEC
13	The wetland has High Resource Value as determined by a score of 75 and above using the TRAM or non-HGM TRAM (to be determined after completing the quantitative portion of this manual)	No	Determination Required by TDEC

End of Narrative Rating. Begin Quantitative Rating on Next Page.

Quantitative Rating

Value Added Section

Wetland Size – Wetland size may increase particular wetland functions or provide greater habitat value to wildlife. In some regions, large wetlands or wetlands of certain types may be rare and may play a vital and significant local and/or regional ecological role. Refer to Tables 1 through 3 below for assessing value added points to wetland size.

Other Significant Value – See Table 4 for value added due to other significant wetland values

Critical Sizes for Tennessee Wetlands by HGM Class and Region of State

Table 1. Depression wetland size throughout Tennessee (max 5 pts). Estimate the area of wetland. Select the appropriate size class and assign score.	Score
≥5 acres	5
3 - <5 acres	3

Table 2. Slope and Flat wetland size throughout Tennessee (max 5 pts). Estimate the area of wetland. Select the appropriate size class and assign score.	Score
≥50 acres	5
25 - <50 acres	3
10 - <25 acres	2
5 - <10 acres	1

Table 3. Riverine wetland size in central and eastern Tennessee (max 5 pts). Estimate the area of wetland. Select the appropriate size class and assign score.	Score
≥50 acres	5
25 - <50 acres	3
10 - <25 acres	2
5 - <10 acres	1

Table 4. Other significant value (max 5 pts). Estimate the area of wetland. Select the appropriate size class and assign score.	Score
Wetland falls within a category from lines 8-12 of the Exceptional Status Wetlands Decision Table (pg. 18) but has not been determined by TDEC to qualify for Exceptional Tennessee Waters status.	5

No value added = 0

Marion Co., Shellmound Rd. LM 1.27 to LM 1.47 Bridge Replacement PIN 130902.00



TH001781: STR-1 facing upstream before inlet on I-24.



TH001780: STR-1 facing downstream towards inlet on I-24.

Marion Co., Shellmound Rd. LM 1.27 to LM 1.47 Bridge Replacement PIN 130902.00



TH001745: STR-1 and WWC-1 *(130900.00-WWC-2) confluence before crossing under shellmound Road.

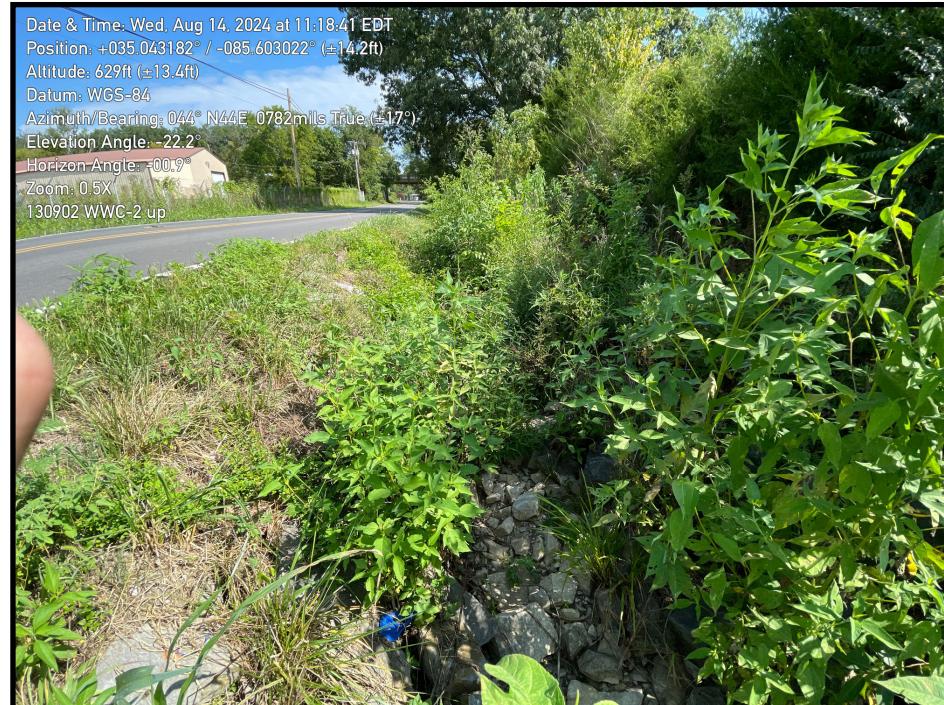


TH001743: PND-1 on Shellmound Road.

Marion Co., Shellmound Rd. LM 1.27 to LM 1.47 Bridge Replacement PIN 130902.00

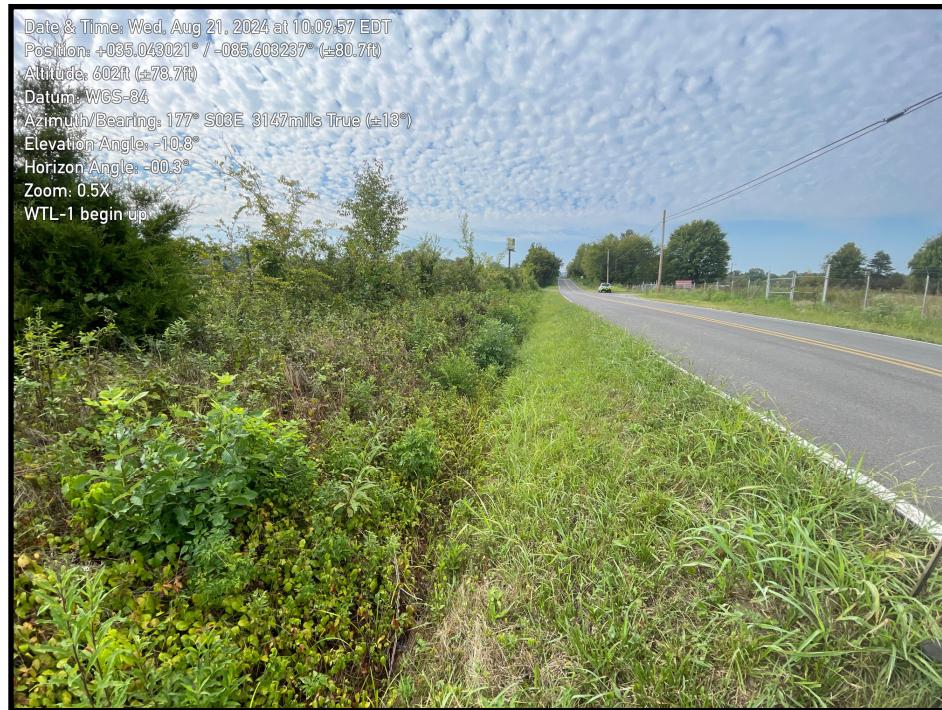


TH001747: WWC-1 *(130900.00-WWC-2) facing upgradient at inlet.

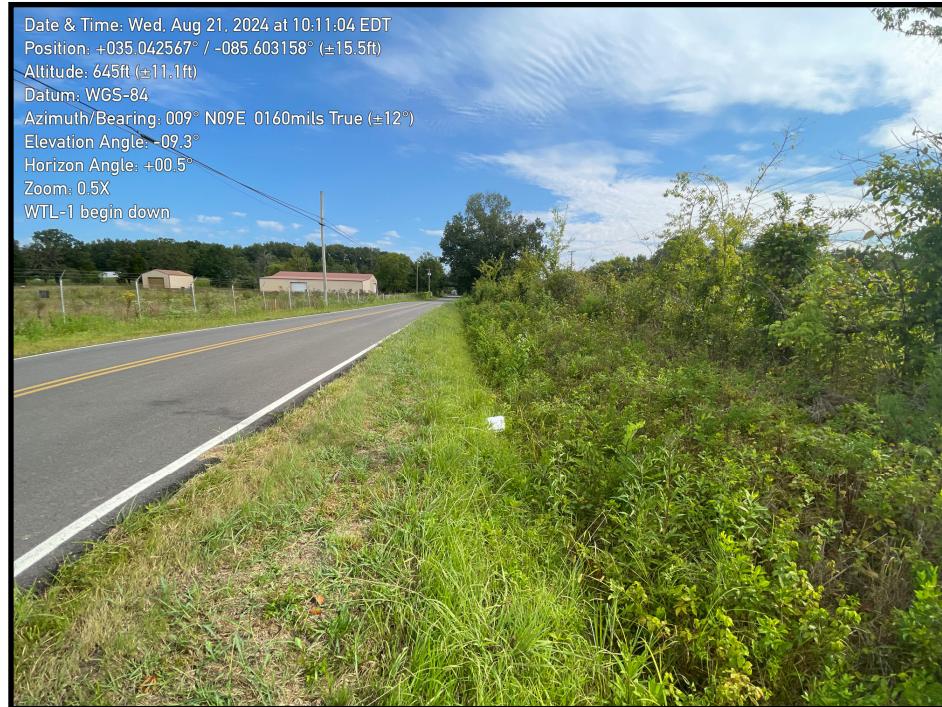


TH001746: WWC-1 *(130900.00-WWC-2) facing downgradient at inlet.

Marion Co., Shellmound Rd. LM 1.27 to LM 1.47 Bridge Replacement PIN 130902.00



TH001770: WTL-1 facing upgradient before WWC-1 *(130900.00-WWC-2) and STR-1 confluence.



TH001771: WTL-1 facing downgradient towards WWC-1 *(130900.00-WWC-2) and STR-1 confluence.



Tennessee Ecological Services Field Office

FWS Log No: 2024-0145040

The Service concurs with your effect determination(s) for resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). This finding fulfills the requirements of the Act. If project design changes are made or new information becomes available, please submit new plans for review.

Field Supervisor

Date



[EXTERNAL] 130900.00 and 130902.00 Marion Co., I-24 and Shellmound Road Bridge Replacements- Updated Consultation

From James Quilliams <James.Quilliams@tn.gov>

Date Mon 6/9/2025 12:37 PM

To TDOT_USFWS <tdot_usfws@fws.gov>

Cc Harris, Abigail N <abigail_harris@fws.gov>; Giddens, David W <david_giddens@fws.gov>

2 attachments (643 KB)

USFWS Response 130902.00 10-8-2024.pdf; USFWS Response 130900.00 10-8-2024.pdf;

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Abigail Harris,

This email is in response to a conversation I had with Wesley Giddens today, 6/9/2025. I inquired about two projects (130900.00 and 130902.00) that were originally coordinated with John Griffith on 10/8/2024 (attached), resulting in the request of a bat survey for the project study area. After speaking with Wesley, it was determined that a bat study would not be sufficient consultation for these projects and the USFWS would propose the time of year tree clearing restrictions (November 16th through March 31st) for both projects instead. Please see below the proposed tree clearing consultation commitment for projects 130900.00 and 130902.00. Please let me know if you need any additional information and it will be provided.

(PIN 130900.00)

Thank you for your time reviewing the subject project: PIN 130900.00 Marion Co., I-24 Bridge replacement over Shellmound Road. Based on your response of the proposed project being located in the winter buffer for the federally endangered Indiana bat (*Myotis sodalis*) and the proposed federally endangered tricolored bat (*Perimyotis subflavus*), TDOT has committed to perform all tree clearing activities in the timeframe of November 16th through March 31st. In adherence to the proposed scope of work, and the aforementioned tree clearing commitment, TDOT concludes the subject project will "not likely adversely affect" the federally endangered Indiana bat (*Myotis sodalis*) or the proposed federally endangered tricolored bat (*Perimyotis subflavus*).

I would appreciate your review and comment regarding concurrence or other findings for these determinations.

The above coordination is in compliance with the U.S. Fish and Wildlife Coordination Act of 1958 and the Endangered Species Act of 1973, as amended. Thank you for your assistance with this project. If you have any questions or need additional information, please contact me at 423-463-6103.

(PIN 130902.00)

Thank you for your time reviewing the subject project: PIN 130902.00 Marion Co., Shellmound Road bridge replacement over I-24. Based on your response of the proposed project being located in the winter buffer for the federally endangered Indiana bat (*Myotis sodalis*) and the proposed federally endangered tricolored bat (*Perimyotis subflavus*), TDOT has committed to perform all tree clearing activities in the timeframe of November 16th through March 31st. In adherence to the proposed scope of work, and the aforementioned tree clearing commitment, TDOT concludes the subject project will “not likely adversely affect” the federally endangered Indiana bat (*Myotis sodalis*) or the proposed federally endangered tricolored bat (*Perimyotis subflavus*).

I would appreciate your review and comment regarding concurrence or other findings for these determinations.

The above coordination is in compliance with the U.S. Fish and Wildlife Coordination Act of 1958 and the Endangered Species Act of 1973, as amended. Thank you for your assistance with this project. If you have any questions or need additional information, please contact me at 423-463-6103.

Kind Regards,
James Ian Quilliams



James “Ian” Quilliams | Senior Technical Specialist-Ecology

Region 2 Environmental Section

7512 Volkswagen Drive, Chattanooga, TN 37416

p. 423-510-1101 c. 423-463-6103

james.quilliams@tn.gov

tn.gov/tdot

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-

From: [Griffith, John](#)
To: [Dennis Crumby](#)
Cc: [Sikula, Nicole R](#); [Andy Barlow](#)
Subject: [EXTERNAL] Re: IPaC delivered Official Species List for project: TDOT PIN 130902.00 Marion County Shellmound Road, Bridge over I-24 Eastbound (TMA)
Date: Tuesday, October 8, 2024 3:04:05 PM

This Message Is From an External Sender

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Dennis,

Thank you for your correspondence regarding the proposed Shellmound Road Bridge over Interstate 24 at LM 1.36 in Marion County, Tennessee. The scope of work would involve replacement of the existing bridge with a 160-foot-long, 2-span, concrete beam bridge. The typical section on the proposed structure would consist of two 11-foot lanes with 4-foot shoulders. The bridge alignment would be shifted to the east, requiring the project to be extended 0.11-mile to the north and 0.12-mile to the south to tie in the approaches. Tree removal would be required for the project. You are requesting a list of federally threatened or endangered species that may be present in the project area.

Our database indicates that the project lies within the swarming areas of Nickajack Cave, a documented hibernaculum for the federally endangered Indiana bat (*Myotis sodalis*), and Little Cedar Mountain Cave, a documented hibernaculum for the proposed endangered tricolored bat (*Perimyotis subflavus*). A qualified individual should assess potential impacts to these species as a result of the project. As a designated representative for the Federal Highway Administration (FHWA), the Tennessee Department of Transportation may submit its assessment and findings directly to this office for review and concurrence. A finding of "may affect" can be addressed through formal consultation by the FHWA, except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species.

This email will serve as our official project response. Please let me know if we can offer further assistance. Thanks,

John Griffith
Transportation Biologist
U.S. Fish and Wildlife Service
Tennessee Field Office
931-444-1393 (office)
931-261-3755 (cell)

From: Administrator Email <ecosphere_support@ecosphere.fws.gov>

Sent: Wednesday, September 18, 2024 3:02 AM

To: Griffith, John <john_griffith@fws.gov>; Tennessee ES, FWS <tennesseeES@fws.gov>; Sykes,

Robbie <robbie_sykes@fws.gov>; Alexander, Steven <steven_alexander@fws.gov>

Subject: IPaC delivered Official Species List for project: TDOT PIN 130902.00 Marion County Shellmound Road, Bridge over I-24 Eastbound (TMA)

To: IPaC point(s) of contact for Tennessee Ecological Services Field Office

Project Location: Marion County, Tennessee

IPaC has delivered an official Section 7 species list on behalf of your office. For your convenience, IPaC has created an ETK project ([2024-0145040](#)) with a new associated 'Species List Provided' event. A PDF file of the species list document is attached to the event and contact information for the project can be found on the last page of the PDF.

IPaC has automatically set the consultation status to "Closed". If you need to do any additional work in this project (e.g., add staff, add events, change lead office, etc.), you must first change the status to "active" so that you can edit the project. You can access the project via the link, above.

Lead FWS Office:

The Tennessee Ecological Services Field Office is currently designated as the lead office for Section 7 on this project. The following additional offices have jurisdiction and have been notified: None. If another office is the lead office on this project, please access the project (via the link above) and update it. IPaC will not reset the Lead Office once it has been updated by a biologist.

*Projects created in ETK by IPaC have not been assigned to an FWS staff member. To identify the staff assigned to this project, please access the project (via the link above) and add their name(s).



TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER
5107 EDMONDSON PIKE
NASHVILLE, TENNESSEE 37211

10/15/2024

Dennis Crumby / Ecology Section
Environmental Division
James K. Polk BLDG., Suite 900
505 Deaderick Street
Nashville, TN 37242-0334
p. 615-253-2465 c. 615-761-8513

RE: Marion County; Shellmound Road, Bridge over I-24 Eastbound (TMA) PIN 130902.00

Dear Mr. Crumby,

The Tennessee Wildlife Resources Agency has reviewed the information provided for the proposed bridge replacement for the Shellmound Road Bridge over I-24 Eastbound (TMA) in Marion County, Tn. You have requested that we provide your office with a list of threatened or endangered species that may be present in the vicinity of the proposed project.

Our databases show documented occurrences of multiple state listed species within 4.0 miles for the project location however, based on the scope of work and location of the project our agency does not anticipate significant adverse impacts to these species provided that all applicable TDEC and US EPA approved Erosion Prevention/Silt Control measures and Best Management Practices be planned for, implemented, monitored, and maintained throughout construction.

Thank you for the opportunity to review and comment on this proposed project. If I may be of further assistance, please contact me at Andy.Barlow@tn.gov.

Sincerely,

A handwritten signature in black ink that reads "Andy Barlow".

Andy Barlow
Wildlife Biologist/Liaison to TDOT and the Federal Highway Administration

The State of Tennessee

AN EQUAL OPPORTUNITY, EQUAL ACCESS, AFFIRMATIVE ACTION EMPLOYER

Dennis Crumby

From: twrasurveymgmt@gmail.com
Sent: Tuesday, September 17, 2024 10:28 AM
To: Dennis Crumby; Andy Barlow
Subject: [EXTERNAL] Environmental Review Request: 1726592400000

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Dennis Crumby

Auto-generated email

DO NOT REPLY

Tennessee Wildlife Resource Agency has received your submission. If additional information is required, Biodiversity Division staff will reach out via the contact information you provided. Although we strive to respond to review requests as quickly as possible, a formal response may take up to 30 days.

Thank you,

TWRA Biodiversity

Index Of Sheets

TITLE SHEET	1
TYPICAL SECTIONS	2B, 2B1
RIGHT-OF-WAY ACQUISITION TABLE and PROPERTY MAP	3A - 3B
PRESENT LAYOUT	4
RIGHT-OF-WAY DETAILS	4A
PROPOSED LAYOUT	4B
PROPOSED PROFILE	4C
SIDE ROAD PROFILE	5
DRAINAGE MAP	6
ROADWAY CROSS SECTIONS	7 - 18

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING

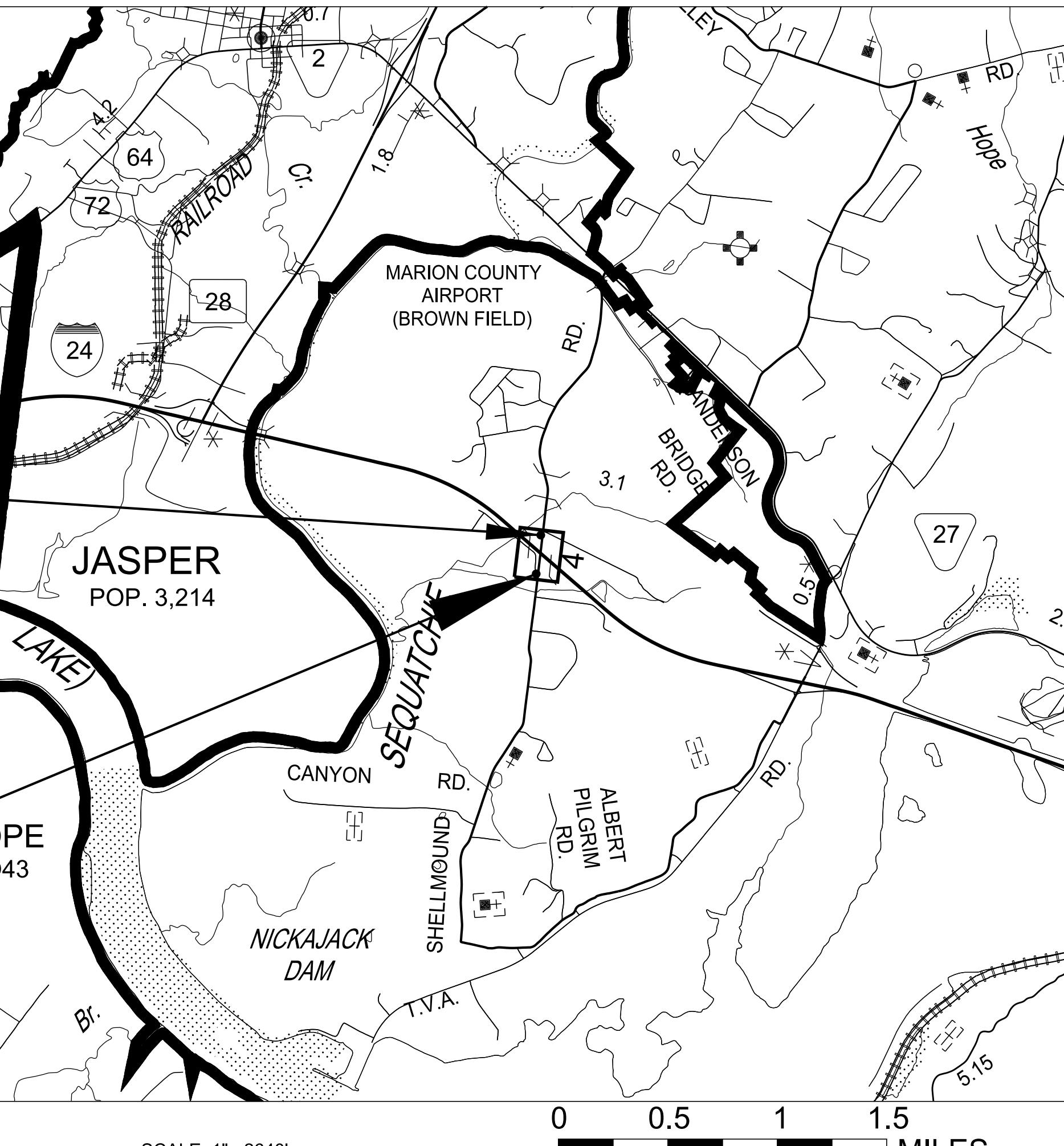
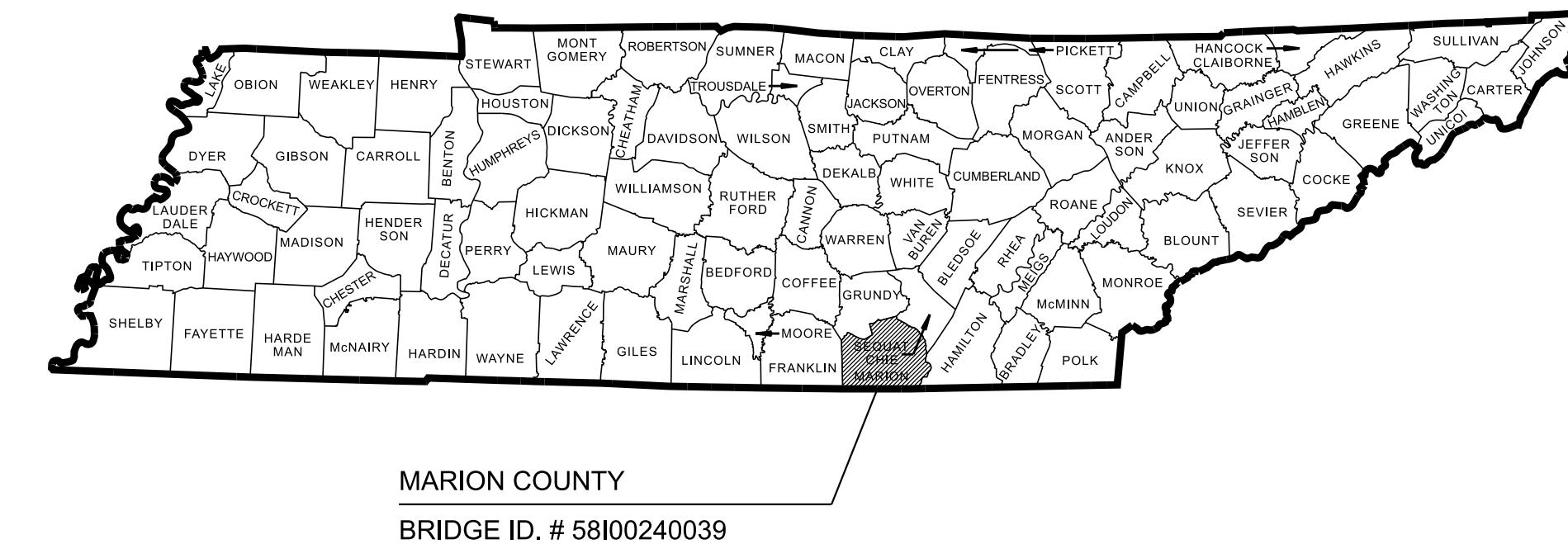
DOES THIS PROJECT QUALIFY FOR UTILITY CHAPTER 86	YES	NO
TENN.	YEAR	SHEET NO.
2025	1	
FED. AID PROJ. NO.		BR-I-24-2(184)
STATE PROJ. NO.		58100-0187-44

MARION COUNTY

SHELLMOUND ROAD
BRIDGE OVER INTERSTATE 24 EASTBOUND
(LOG MILE 1.36)

LINE AND GRADE BRIDGE REPLACEMENT

STATE HIGHWAY NO. N/A F.A.H.S. NO. N/A



58100-0187-44
END PROJECT NO. BR-I-24-2(184) PRELIMINARY
STA. 65+90.00 SHELLMOUND RD
N 258108.1342 E 2087221.9278

58100-0187-44
BEGIN PROJECT NO. BR-I-24-2(184) PRELIMINARY
STA. 56+50.00 SHELLMOUND RD
N 257174.6896 E 2087111.1073

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2021 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT PROJECT MANAGER: CHANEL HIPPIX, PMP

DESIGNED BY: ARCADIS U.S., INC.

DESIGNER : MARC HAWKINS, P.E.

CHECKED BY: FRITZ BROGDON, P.E.

P.E. NO. 58100-0187-44 (NEPA)

PIN NO. 130902.00

R.O.W. LENGTH	0.000 MILES
ROADWAY LENGTH	0.149 MILES
BRIDGE LENGTH	0.029 MILES
BOX BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES ▲
PROJECT LENGTH	0.178 MILES

Not included in the project length (Non Riding Surface).

NO EXCLUSIONS

ROAD TO BE CLOSED
DURING CONSTRUCTION

LINE
AND
GRADE

SEALED BY

APPROVED:

WILL REID, CHIEF ENGINEER

DATE:

APPROVED:

HOWARD H. ELEY, COMMISSIONER

SURVEY 05-06-24	TRAFFIC DATA
	ADT (2026) 1,750
	ADT (2046) 1,930
	DHV (2046) 232
	D 65 - 35
	T (ADT) 3 %
	T (DHV) 2 %
	V 30 MPH

COORDINATES ARE NAD83(2011) ADJUSTED BY
THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS
ARE REFERENCED TO THE NAVD 1988 USING GEOID18 MODEL

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:
DIVISION ADMINISTRATOR DATE

TYPE	YEAR	PROJECT NO.	sheet NO.
PRELIM.	2025	58100-0187-44	4B

